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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/591,467	09/01/2006	Takeshi Kimura	040302-0592	1871

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EXAMINER

ALGAHAIM, HELAL A

ART UNIT	PAPER NUMBER
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3663

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/591,467	Applicant(s) KIMURA ET AL.	
	Examiner HELAL A. ALGAHAIM	Art Unit 3663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>09/01/2006; 11/16/2006 and 06/20/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims **1-6, 8-11 and 15-20** are rejected under 35 U.S.C. 102(b) as being anticipated by **Seto et al (Pub. Number: 2003/0067219)**.

Regarding claim 1: Seto et al disclose a system for assisting a driver operating a vehicle traveling on a road, the system comprising:

a device arrangement determining an obstacle as a target obstacle in a path of the vehicle and providing information on the target obstacle and width of the target obstacle (see **fig. 1, fig. 3 and fig. 4**).

a device detecting status of the vehicle (see at least **fig. 1**)

a device determining a risk that the vehicle may come into contact with the target obstacle based on the information on the target obstacle and the detected status of the vehicle (see at least **fig. 2, fig. 4 and page 2, paragraph 0024**)

a control arrangement regulating at least one of a reaction force input to the driver and a force applied to the vehicle based on the determined risk and the width of the target obstacle (see at least **fig. 2 and 3**).

Regarding claim 2: Seto et al disclose the system as recited in claim 1, wherein the control

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arrangement includes a controller that regulates the at least one of the reaction force input to the driver and the force applied to the vehicle in response to a control amount determined based on the determined risk (**see at least fig. 1 and fig. 2**).

Regarding claim 3: Seto et al disclose the system as recited in claim 2, wherein the device arrangement includes a width measurement device that measures a width of the target obstacle, and the control arrangement includes a correction device that corrects the control amount based on the measured width of the target obstacle (**see at least page 2, paragraph 0032**).

Regarding claim 4: Seto et al disclose the system as recited in claim 3, wherein the force applied to the vehicle is at least one of a driving force and a braking force (**see at least fig. 2**)

Regarding claim 5: Seto et al disclose the system as recited in claim 3, wherein the smaller the width of the target obstacle, the smaller the correction of the control amount (**see at least page 2, paragraph 0026, 0027 and 0028**).

Regarding claim 6: Seto et al disclose the system as recited in claim 3, wherein the correction device corrects the control amount based on the measured width upon determining that the vehicle is overtaking the target obstacle (**see at least fig. 2 and page 2, paragraph 0026, 0027 and 0028**).

Regarding claim 8: Seto et al disclose the system as recited in claim 1, wherein the control

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arrangement regulates a reaction force from a driver controlled input device for longitudinal control of the vehicle (**see at least fig. 2. and page 2, paragraph 0009**)

Regarding claim 9: Seto et al disclose the system as recited in claim 1, wherein the control arrangement regulates a reaction force from a driver controlled input device for lateral control of the vehicle (**see at least fig. 7**).

Regarding claim 10: Seto et al disclose the system as recited in claim 9, wherein the driver controlled input device is a steering wheel (**see at least abstract**).

Regarding claim 11: Seto et al disclose the system as recited in claim 1, wherein the path of the vehicle is an estimated path (**see at least fig. 3, fig. 4 and page 2, paragraph 0030**).

Regarding claims 15-20: They're rejected using the same prior arts and same rationales as claims 1-3 above.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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2. Claims **7 and 12-14** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Seto et al (Pub. Number: 2003/0067219) in view of Friederich et al (Patent Number: 6624747)**.

Regarding claim 7: Seto et al disclose the system as recited in claim 3, **but does not explicitly disclose** wherein the correction device corrects the control amount based on the measured width and an overlap between the target obstacle and the path. **However, Friederich et al discloses this limitation, see at least abstract. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the feature taught by Friederich et al in Seto et al system to avoid a collision of a vehicle with an obstacle by steering the vehicle past the obstacle.**

Regarding claim 12: The Combination of Seto et al and Friederich et al disclose the system as recited in claim 7, wherein the control amount is variable with a gain, and wherein the correction device gradually increases the gain from a predetermined value as the overlap increases (**see Friederich et al at least, col. 6, claims 3**).

Regarding claim 13: The combination Seto et al and Friederich et al disclose the system as recited in claim 7, wherein the control amount is variable with a gain, and wherein the correction device gradually increases the gain from 0 (zero) as the overlap increases after exceeding a predetermined value (**see Friederich et al at least, col. 6, claims 3**).

Regarding claim 14: The combination Seto et al and Friederich et al disclose the system as

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recited in claim 7, wherein the control amount is variable with a gain, and wherein the correction device gradually increases the gain from a predetermined value as the overlap varies in increasing direction after exceeding a predetermined value, but gradually decreases the gain to 0 (zero) as the overlap varies in decreasing direction (see **Friederich et al at least, col. 6, claims 3 and 4**).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HELAL A. ALGAHAIM whose telephone number is (571)270-5227. The examiner can normally be reached on Monday - Friday from 7:30 AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack W. Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/H. A. A./

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Examiner, Art Unit 3663

/Jack W. Keith/

Supervisory Patent Examiner, Art Unit 3663